REMARKS/ARGUMENTS

The Office Action mailed December 24, 2003 has been reviewed and carefully considered. Claims 6 and 9-12 are canceled. Claims 1-5 and 7-8 are pending in this application, with claim 1 being the only independent claim. Reconsideration of the above-identified application, in view of the following remarks, is respectfully requested.

In the Office Action mailed December 24, 2003, claims 1-5 and 7-8 stand rejected under 35 U.S.C. §103 as unpatentable over U.S. Patent No. 4,144,811 (Barnett) in view of U.S. Patent No. 6,050,190 (Knauer), U.S. Patent No. 5,925,496 (Ghosh) and Applicant's Admitted Prior Art (AAPA).

Before discussing the cited prior art and the Examiner's rejections of the claims in view of that art, a brief summary of the present invention is appropriate. The present invention relates to a solution for the problem caused by localized differences in temperature of a blanket on a transfer cylinder caused by non-uniform heating of the blanket and the resultant deformations which may occur in the transfer cylinder due to the temperature differences. According to the present invention, the solution involves making a transfer cylinder with a body made of a metallic material having a linear coefficient of about $\alpha < 5 \times 10^{-6}K^{-1}$ in a temperature range of from about 20° to about 60°. More specifically, the metallic material is an iron alloy having 30% to 40% nickel by weight.

Independent claim 1 expressly recites that the printing cylinder is a transfer cylinder on which a blanket cylinder is receivable on which localized temperature differences may occur. Independent claim 1 recites that the barrel of the transfer cylinder is "made of a metallic material having a linear coefficient of about $\alpha < 5 \times 10^{-6}K^{-1}$ in a temperature range of from about 20° to about 60°."

As set forth in the MPEP §2142, an Examiner is required to set forth a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met: (1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

It is respectfully submitted that neither Barnett, Knauer, Ghosh, AAPA, nor the combination thereof provide motivation for using a metallic material having a linear coefficient of about $\alpha < 5 \times 10^{-6}K^{-1}$ in a temperature range of from about 20° to about 60°, as the material for a transfer cylinder in a printing press. A patentable invention may lie in the discovery of the source of a problem. *In re Sponnable*, 160 USPQ 237, 243 (C.C.P.A. 1969). None of the prior art of record discloses the problem of localized differences in temperature in transfer cylinders, which problem is alleviated by the features expressly recited in independent claim 1.

Barnett discloses a printing machine in which printing rollers 52 carry the print type on printing saddles or plates (see Fig. 2 and col. 5, lines 53-55). The printing roller 52 prints directly onto a paper web 48 which passes between the printing roller 52 and an impression roller 50. Form rollers 14, 16 transport ink to the form cylinder during printing (col. 5, lines 61-65). The pressure and the amount of ink transferred by the form rollers 14, 16 to the form cylinder 52 is adjustable by adjustable bearings 10, 12. Barnett teaches that changes in the temperature have an expanding effect on the printing cylinder due to coefficient of expansion (col. 4, lines 2-25). The

form rollers may be adjusted to overcome this thermal expansion (col. 4, lines 26-32). Accordingly, Barnett teaches that detrimental effects of thermal expansion of a printing roller may be counteracted by adjusting a position of the form cylinders which supply ink to the printing roller. The Examiner states that Barnett fails to disclose that the barrel of a transfer cylinder is made of a specific metallic material. In fact, it is noted that Barnett fails to disclose a transfer cylinder. Furthermore, there is no teaching or suggestion in Barnett regarding localized differences in temperature. Since Barnett teaches that the effects of thermal expansion can be overcome by the adjustable form rollers 14, 16, Barnett fails to disclose, teach, or suggest that the entire barrel of the transfer cylinder is made completely of a metallic material having a linear coefficient of expansion of about $\alpha < 5 \times 10^{-6}K^{-1}$ in a temperature range of from about 20° to about 60°, as expressly recited in independent claim 1.

Ghosh fails to teach or suggest what Barnet lacks. Ghosh discloses an anodized zirconium metal lithographic printing members. The object of Ghosh is to provide a ceramic lithographic printing plate that has great strength, fracture resistance and wearability. There is no specific teaching regarding the coefficients of expansion of the cylinder. Ghosh fails to provide any motivation for using a metallic material having a linear coefficient of about $\alpha < 5 \times 10^{-6}K^{-1}$ in a temperature range of from about 20° to about 60°, as the material for a transfer cylinder in a printing press, as expressly recited in independent claim 1. Even if the materials taught by Ghosh were used in Barnett, the combination still fails to teach or suggest the material of the claimed invention. Furthermore, Ghosh does not address the subject of thermal expansion and Barnett solves the problem caused by thermal expansion by using an inventive method of adjusting the form rollers on the printing cylinder to alleviate the effects caused by the thermal expansion caused by the overall increase in temperatures. However, there is no motivation or suggestion for the making the entire

barrel of the transfer cylinder completely of a metallic material having a linear coefficient of expansion of about $\alpha < 5 \times 10^{-6}K^{-1}$ in a temperature range of from about 20° to about 60°, as expressly recited in independent claim 1.

The AAPA merely discloses the existence of a metallic material having a linear coefficient of about $\alpha < 5 \times 10^{-6}K^{-1}$ in a temperature range of from about 20° to about 60°. There is no motivation for using such a material for a transfer cylinder in a printing press, as expressly recited in independent claim 1. As stated above, since the problems in Barnett caused by thermal expansion are solved using the inventive adjustable roller configuration disclosed by Barnett and because the materials disclosed in Ghosh fail to teach or suggest the claimed material, there is no motivation in Barnett or Ghosh to use the claimed material, even though the material was in existence, as disclosed by AAPA. The claimed material is typically more expansive material. Without any further motivation for using such material, one skilled in the art would not use the claimed material as a replacement for the other metallic materials listed by Ghosh. The motivation to use the claimed material is supplied only by the present application. As specified in the above cited section of the MPEP and as further noted by the Federal Circuit, "one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention". *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed Cir. 1988).

Knauer is merely used by the Examiner to show journals. Knauer does not teach or suggest using a material having a linear coefficient of about $\alpha < 5 \times 10^{-6}K^{-1}$ in a temperature range of from about 20° to about 60°, as expressly recited in independent claim 1.

In view of the above remarks, the present invention is deemed to be in form for allowance and early notice to that effect is earnestly solicited.

Respectfully submitted,

COHEN, PONTANI, LIEBERMAN & PAVANE

By _____

Alfred W. Froebrich
Reg. No. 38,887
551 Fifth Avenue, Suite 1210
New York, New York 10176
(212) 687-2770

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